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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,466	05/11/2005	Juerg Zellweger	26764U	6956
20529	7590	05/16/2007		
NATH & ASSOCIATES 112 South West Street Alexandria, VA 22314			EXAMINER ROST, ANDREW J	
			ART UNIT	PAPER NUMBER
			3753	
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			05/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/534,466

Applicant(s)

ZELLWEGER, JUERG

Examiner

Andrew J. Rost

Art Unit

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 7-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 7-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/27/2007 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 recites the limitation "to begin with preferably in a elliptically curved or conical, and then in a frustoconical path" in line 3. This recited limitation appears to redefining the outer walls as recited in claim 1. Therefore, it is unclear as to claimed structure.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 3753

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3, 7, 8, 10-12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masloff (5,293,898) in view of Larbuisson (5,806,832) and further in view of Hayward (1,125,315).

Regarding claim 1, Masloff discloses a valve assembly having a closing body (2) in a housing (1) that is guided on a track (13) and pressed against a valve seat (9), with the closing body having interference means being an interfering edge (intersection between conical portions of the valve head 7) and the closing body having a conical outer wall portion and an elliptically curved outer wall portion (the conical portion is to the right of the interference edge with the elliptically curved outer wall being to the right of the conical portion as seen in fig. 1). Masloff does not disclose a collecting cone acting as a lock. However, Larbuisson teaches a cone portion (14) that projects to secure a movable member into a locked position. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a locking mechanism of Larbuisson to the valve assembly of Masloff in order to prevent backflow of fluid and will be automatically locked and may only be released by the application of manual means as taught by Hayward.

In regards to claims 2, 3, 10 and 15, Masloff discloses the interference means are an interference ring disposed along an edge of the closing body with the ring acting as a baffle with the interference ring being at the intersection of two conical portions that intersect at an angle between 60° and 179° (fig. 1).

In regards to claims 7 and 8, Masloff discloses the closing body has a diameter that contacts a valve seat with the outer wall being an elliptically curved portion followed by a conical portion.

In regards to claim 11, the modified Masloff reference discloses a single interference ring extending into the flow path. The modified Masloff reference does not disclose the interference edge being a circumferential recess. However, It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a second interference ring in order to further modify the fluid flow and pressure drop around the closing body, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art.

In regards to claim 12, Hayward teaches the use of a hollow body for a valve shut-off in order to provide a fluid cut-off that will permit fluid to flow around the shut-off valve without lessening or decreasing the volume of the device (page 1, lines 25-36).

6. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masloff in view of Larbuisson further in view of Hayward and further in view of Applicant's Admitted Prior Art (Applicant's specification, page 1, last paragraph, lines 4-6).

Masloff in view of Larbuisson and further in view of Hayward disclose a safety valve configured as a hollow body with a conical latch and an outer wall having an elliptical portion and a conical portion. The modified Masloff reference does not disclose constructing the valve member of sheet metal. However, Applicant's Admitted

Art Unit: 3753

Prior Art discloses that forming closing bodies of sheet metal and of a hollow body nature in order to keep the inert mass as small as possible to be old and well known in the art (Applicant's specification, page 1, last paragraph, lines 4-6). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct the valve member of the modified Masloff reference of sheet metal as taught by Applicant's Admitted Prior Art in order to keep the inert mass as small as possible.

7. Claims 9 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masloff in view of Larbuisson further in view of Hayward and further in view of Payton (4,562,861).

Masloff in view of Larbuisson and further in view of Hayward disclose a safety valve configured as a hollow body with a conical latch and an outer wall having an elliptical portion and a conical portion. The modified Masloff reference does not disclose an interfering edge on the housing. However, Payton discloses an interference ring (constriction 3) extending into a flow path to influence the movement of the valve member. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the interference means of the modified Masloff reference on the housing as taught by Payton in order to provide an alternative form of flow control to influence the movement of the valve member with the creation of turbulent flow.

8. Claims 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masloff in view of Payton.

Regarding claim 17, Masloff discloses a valve assembly having a closing body (2) in a housing (1) that is guided on a track (13) and pressed against a valve seat (9), with the closing body having interference means being an interfering edge (intersection between conical portions of the valve head 7) and the closing body having a conical outer wall portion and an elliptically curved outer wall portion (the conical portion is to the right of the interference edge with the elliptically curved outer wall being to the right of the conical portion as seen in fig. 1). Masloff does not disclose an interfering edge on the housing. However, Payton discloses an interference ring (constriction 3) extending into a flow path to influence the movement of the valve member. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the interference means of Masloff on the housing as taught by Payton in order to provide an alternative form of flow control to influence the movement of the valve member with the creation of turbulent flow.

In regards to claims 18-20, Payton teaches the placement of an interference means (flow constriction 3) that juts into the flow cross-section in the area of the valve member.

9. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Masloff in view of Payton and further in view of Hayward.

Masloff in view of Payton disclose safety valve configured with an outer wall

having an elliptical portion and a conical portion. The modified Masloff reference does not disclose the closing body to be a hollow member. However, Hayward teaches the use of a hollow body for a valve shut-off in order to provide a fluid cut-off that will permit fluid to flow around the shut-off valve without lessening or decreasing the volume of the device (page 1, lines 25-36). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the closing body of the modified Masloff reference as a hollow body as taught by Hayward in order to provide a fluid cut-off that will permit fluid to flow around the shut-off valve without lessening or decreasing the volume of the device.

10. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Masloff in view of Payton, further in view of Hayward and further in view of Applicant's Admitted Prior Art (Applicant's specification, page 1, last paragraph, lines 4-6).

Masloff in view of Payton and further in view of Hayward disclose a safety valve configured as a hollow body and an outer wall having an elliptical portion and a conical portion. The modified Masloff reference does not disclose constructing the valve member of sheet metal. However, Applicant's Admitted Prior Art discloses that forming closing bodies of sheet metal and of a hollow body nature in order to keep the inert mass as small as possible to be old and well known in the art (Applicant's specification, page 1, last paragraph, lines 4-6). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct the valve member of the modified Masloff reference of sheet metal as taught by Applicant's

Art Unit: 3753

Admitted Prior Art in order to keep the inert mass as small as possible.

11. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Masloff in view of Payton and further in view of Sands (3,085,589).

Masloff in view of Payton disclose safety valve configured with an outer wall having an elliptical portion and a conical portion. The modified Masloff reference does not disclose having the closing body being able to be closed in two directions. However, Sands teaches the use of a safety cut-off that cuts off the flow of fluids in two directions in order to protect the fluid line from sudden pressure increases on either side of the safety valve. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the safety valve of the modified Masloff reference with two valve seats as taught by Sands in order to protect the fluid line from sudden pressure increases on either side of the safety valve.

Response to Arguments

12. Applicant's arguments with respect to claims 1-3 and 7-23 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Beckman (920,716) discloses a pressure regulator having a closing body having a conical portion along with an elliptical portion. Hall (4,811,756) discloses a safety valve having conical portions to contact one of two valve seats and a

Art Unit: 3753

curved portion. Perruzzi (3,326,233) discloses a bi-directional valve with the sealing surfaces having a plurality of outer walls. Schultz (2,806,484) discloses a valve member having a conical outer wall and an elliptical outer wall.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew J. Rost whose telephone number is 571-272-2711. The examiner can normally be reached on 7:00 - 4:30 M-Th and 7:00 - 12:00 Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Keasel can be reached on 571-272-4929. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AJR, ASR 11 MAY 2007

A handwritten signature in black ink, appearing to read "Eric Keasel", written in a cursive style.

ERIC KEASEL
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700